

Notice of Allowability

Application No.

10/667,535

Examiner

Terry L. Englund

Applicant(s)

ILLEGEMS, PAUL F.

Art Unit

2816

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to RCE/Amdt (Oct 24, 2005).
2. ☒ The allowed claim(s) is/are 16,18, 19, and 25-54 (now renumbered as 1-33, respectively for printing purposes).
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some* c) ☐ None of the:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date _____
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____


TIMOTHY P. CALLAHAN
SUPERVISORY PATENT EXAMINER

EXAMINER'S AMENDMENT

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to the applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

The application has been amended as follows:

Claim 19, line 3: changed "voltage level detector" to --differential input stage--;

Claim 27, line 8: changed "the second" to --a second--;

Claim 31, line 3: added --the-- prior to both occurrences of "variations";

Claim 32, line 3: changed "the tail" to --a tail--;

Claim 33, line 2: added --the-- prior to "variations";

line 3: added --the-- prior to "variations";

Claim 38, line 3: changed "the tail" to --a tail--;

Claim 44, line 3: changed "the tail" to --a tail--;

Claim 45, line 4: changed "the second" to --a second--;

Claim 48, line 2: added --the-- prior to "variations";

Claim 50, added --the-- prior to both occurrences of "variations"; and

line 13: changed "the tail" to --a tail--.

All of the changes described above are related to inadvertent type oversights by the applicant, and are made to minimize possible confusion within the claims. Although the applicant's amended independent claim 16 had replaced "voltage level detector" with "differential input stage" (e.g. see lines 9-11 of that claim), dependent claim 19 should have also

Art Unit: 2816

had a corresponding change. With the variations initially recited within their corresponding independent claim, or on previous lines within the claim, dependent claims 31, 33, and 48, as well as independent claim 50 had the term --the-- added prior to “variations” to clearly refer back to the earlier recitation of those variations. Claims 32, 38, 44, and 50 had “the tail current” changed to --a tail current-- since only a “tail current transistor” had been cited previously, and no tail current had actually been identified before. Since “the second one” had not been clearly identified in a previous recitation, that phrase was amended to --a second one-- within claims 27 and 45. Therefore, none of the changes described above affect the scope of the claims. They merely address/correct various oversights found when the active claims had been carefully reviewed and considered.

RESPONSE TO RCE/AMENDMENT

The RCE and amendment submitted on Oct 24, 2005 have been reviewed and considered with the following results:

The RCE was approved and entered.

The cancellation of claims 1-15 rendered their corresponding objection(s), and/or rejection(s) moot, where applicable.

Various concerns were noted when the amended, and newly added, claims were reviewed. However, these concerns were considered inadvertent type oversights, minor in nature.

Since the Examiner’s Amendment described above addressed/corrected all of those concerns, there is no known objection or rejection remaining within the present application.

REASONS FOR ALLOWANCE

The following is an examiner’s statement of reasons for allowance:

Art Unit: 2816

None of the prior art references reviewed and considered shows or discloses: 1) a method for applying a composite voltage, corresponding to a constant reference voltage and a threshold voltage component, to a tail current transistor as recited within independent claim 16; or 2) a device, wherein a voltage (with first and second components) is applied to the gate of a tail current transistor as recited within each of independent claims 27, 34, 40, 47, or 50. More specifically, none of the prior art references clearly shows or discloses: 1) the offset voltage of the differential input stage is independent of temperature and/or fabrication parameters, and is also proportional to the constant reference voltage, as recited within claim 16, upon which claims 18-19, and 25-26 depend; 2) the different channel-width-to-length ratios of the NMOS transistors, within a differential pair of NMOS transistors, wherein the source of those transistors are coupled to the drain of the tail current transistor as recited within claim 27, upon which claims 28-33 depend; 3) the specific constant current sink and diode-connected transistor relationships as recited within each of claims 34 and 40, upon which claims 35-39 and 41-46, respectively depend; or 4) the tail current (I_t) of the tail current transistor is equal to $(\beta/2) \cdot (V_{eff})^2$ as recited within claims 47 and 50, upon which claims 48-49 and 51-54 respectively depend. Since there is no strong motivation to modify or combine any prior art reference(s) to ensure all of the recited limitations within any one of the independent claims are met, the claims are deemed patentably distinct over the prior art of record.

Claims 16, 18-19, and 25-54 are allowed, and have been renumbered as 1-33, respectively for printing purposes. The renumbering takes into account the cancellation of claims 1-15, 17, and 20-24.

Art Unit: 2816

Any comments considered necessary by the applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Any inquiry concerning this communication, or previous communications, from the examiner should be directed to Terry L. Englund whose telephone number is (571) 272-1743. The examiner can normally be reached Monday-Friday from 7 AM to 3 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tim Callahan, can be reached on (571) 272-1740.

The new central official fax number is (571) 273-8300.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (571) 272-1562.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Terry L. Englund

7 January 2006